

U.S. Patent Application Serial No. 09/893,522
Response to OA dated November 27, 2007

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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A fluid control device wherein
a plurality of lines each comprise a plurality of fluid controllers arranged at an upper level
and a plurality of coupling members arranged at a lower level,
the plurality of lines being arranged in parallel on a base member and having inlets directed
in the same direction, with outlets thereof facing toward the same direction,
the fluid control device being characterized in that the base member has at least one
orthogonal rail extending in a direction orthogonal to the line and each line is mounted on a
respective line supporting rail of a plurality of line supporting rails,
[[the]] each line supporting rail being slidably mounted on the at least one orthogonal rail
relative to other of said line supporting rails,
[[the]] each line supporting rail, when slidably mounted, being slidable in a direction
orthogonal to the line along the at least one orthogonal rail,
the plurality of coupling members being slidably mounted on the line supporting rail in a
manner in which [[the]] each line supporting rail is slidably mounted on the at least one orthogonal
rail.

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Claim 2 (Currently Amended): A fluid control device wherein
a plurality of lines each comprise a plurality of fluid controllers arranged at an upper level
and a plurality of coupling members arranged at a lower level,

the plurality of lines being arranged in parallel on a base member having at least one
orthogonal rail extending in a direction orthogonal to the plurality of lines, the plurality of lines
having inlets directed in the same direction, with outlets thereof facing toward the same direction,

the fluid control device being characterized in that each line is mounted on a line support
member of a plurality of line support members,

[[the]] each line support member being mounted on the at least one orthogonal rail, the line
support member being capable of sliding along the at least one orthogonal rail relative to other of
said line support members in a direction orthogonal to the line after the line support member is
mounted on the at least one orthogonal rail, wherein

[[the]] each line support member is a line supporting rail removably mounted on the at least
one orthogonal rail, and

the coupling members are slidably mounted on the rail,

each of the fluid controllers being mounted on two of the coupling members.

Claim 3 (Currently Amended): A fluid control device wherein a plurality of lines each
comprise:

a plurality of fluid controllers arranged at an upper level and a plurality of coupling members

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arranged at a lower level,

the plurality of lines being arranged in parallel on a base member having at least one orthogonal rail extending in a direction orthogonal to the plurality of lines, the plurality of lines having inlets directed in the same direction, with outlets thereof facing toward the same direction,

the fluid control device being characterized in that the base member is provided with a plurality of tracks arranged in parallel and corresponding to the respective lines,

the plurality of tracks being mounted on the at least one orthogonal rail, ~~[[the]]~~ each track of said plurality of tracks being slidable along the at least one orthogonal rail relative to other of said tracks in a direction orthogonal to the lines after the tracks are mounted on the at least one orthogonal rail,

the coupling members being slidably mounted on the corresponding track,

each of the fluid controllers being mounted on two of the coupling members,

two of the coupling members are not directly connected to each other so that each coupling member can be fixed at any position of the track independently, and

each coupling member has vertical internally threaded portions formed in the upper wall and

each of the fluid controllers is attached to two of the coupling members by driving screws inserted through the controller into the internally threaded portion of the coupling member.

Claim 4 (Currently Amended): A fluid control device wherein a plurality of lines each comprise;

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a plurality of fluid controllers arranged at an upper level and a plurality of coupling members arranged at a lower level,

the plurality of lines being arranged in parallel on a base member having at least one orthogonal rail extending in a direction orthogonal to the plurality of lines, the plurality of lines having inlets directed in the same direction, with outlets thereof facing toward the same direction,

the fluid control device being characterized in that the base member is provided with a plurality of tracks arranged in parallel and corresponding to the respective lines,

the plurality of tracks being mounted on the at least one orthogonal rail, ~~the tracks~~ each track being slidable along the at least one orthogonal rail relative to other of said tracks in a direction orthogonal to the lines after the tracks are mounted on the at least one orthogonal rail,

the coupling members being slidably mounted on the corresponding track,

each of the fluid controllers being mounted on two of the coupling members, wherein

slide members corresponding to the respective coupling members are provided on the track,

each of the slide members being connected to the corresponding coupling member,

two of the coupling members are not directly connected to each other so that each coupling member can be fixed at any position of the track independently, and

each coupling member has vertical internally threaded portions formed in the upper wall and

each of the fluid controllers is attached to two of the coupling members by driving screws inserted through the controller into the internally threaded portion of the coupling member.

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Claims 5 - 34 (Canceled)

Claim 35 (Previously Presented): A fluid control device according to claim 1, 2, 3 or 4 wherein

the base member is shaped in the form of a frame by an inlet-side rail, an outlet-side rail and connecting members interconnecting the side rails.

Claim 36 (Previously Presented): The fluid control device according to claim 1 or 2, wherein the line supporting rail comprises two shape members each having a groove and being arranged side by side, each of the shape members forms the groove between two inward flanges, the groove has a downwardly tapered trapezoidal cross section, and a slide member having a downwardly tapered trapezoidal cross section and a vertical internally threaded portion is provided in the line support member and is connected to one of the coupling members by a screw member.

Claim 37 (Previously Presented): The fluid control device according to claim 1, 2, 3 or 4 wherein a plurality of lines comprise a spare line and only a line supporting rail is provided for the spare line.

Claim 38 (Previously Presented): A fluid control device according to claim 1 or 2 wherein the device is assembled by attaching each line supporting rail having coupling members and fluid

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controllers mounted thereon to the base member.

Claim 39 (Previously Presented): A fluid control device according to claim 1 or 2 wherein lines are modified by removing channel connecting means upward as required, then removing the old line to be modified as mounted on the line supporting rail, slidably moving the line supporting rails of the lines not to be modified when so required, mounting on the base member the line supporting rail of the line to be substituted, further slidably returning the line supporting rails of the lines not to be modified to the proper position, and finally installing channel connecting means as required for modification.

Claim 40 (Previously Presented): A fluid control device according to claim 1 or 2 wherein lines are installed by removing channel connecting means upward as required, slidably moving the line supporting rails of the existing lines as required, mounting on the base member the line supporting rail of the line to be added, further slidably returning the line supporting rails of the existing lines to the proper position, and finally installing channel connecting means as required for addition.

Claim 41 (Previously Presented): The fluid control device according to claim 4, wherein the slide member has an axial length smaller than end-to-end distance between the inward flanges of each of the shape members.

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Claim 42 (Previously Presented): A fluid control device according to claim 1, 2, 3, or 4 wherein

a clearance for inserting a tool therethrough for rotating the screw member is formed between each adjacent pair of the fluid controllers.

Claim 43 (Previously Presented): The fluid control device according to claim 3 or 4, wherein each one of the tracks comprises two shape members each having a groove and being arranged side by side, each of the shape members forms the groove between two inward flanges, the groove has a downwardly tapered trapezoidal cross section, and a slide member having a downwardly tapered trapezoidal cross section and a vertical internally threaded portion is provided in the track and is connected to one of the coupling members by a screw member.

Claim 44 (Previously Presented): A fluid control device according to claim 1 or 2 wherein the fluid controller can be replaced by one having a different length by removing the fluid controller to be replaced, moving the coupling member along the line supporting rail to the required position, fixing the coupling member to the line supporting rail, and mounting the substitute fluid controller on the coupling members concerned.

Claim 45 (Previously Presented): A fluid control device according to claim 1 or 2 wherein an additional fluid controller and an additional coupling member can be installed in the existing line

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by removing a fluid controller adjacent to the additional fluid controller, moving the coupling member adjacent to the additional coupling member along the line supporting rail to the required position, fixing the additional coupling member to the line supporting rail, and mounting the additional fluid controller on the coupling members concerned.

Claims 46 (Previously Presented): A fluid control device according to claim 4 wherein each of the tracks is provided by a line supporting rail removably mounted on the base member.

Claim 47 (Previously Presented): A fluid control device according to claim 1, 2 or 46 wherein

the line supporting rail is U-shaped in cross section and has inward flanges, and a slide member having an internally threaded portion and provided in the rail is connected to the coupling member by a screw member.

Claim 48 (Previously Presented): A fluid control device according to claim 1, 2 or 46 wherein

the line supporting rails are connected to one another by a connecting member.